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THE
ONTARIO WATER RESOURCES
COMMISSION

WATER POLLUTION SURVEY
of the
COMMUNITY OF LEASKDALE
TOWNSHIP OF SCOTT

1965

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TOWNSHIP OF SCOTT

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Report on a water pollution
survey of the community of
Leaskdale in the township of
Scott in the county of Ontario.

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ONTARIO WATER RESOURCES
COMMISSION

Report on a
WATER POLLUTION SURVEY
of the
COMMUNITY OF LEASKDALE
in the
TOWNSHIP OF SCOTT
in the
COUNTY OF ONTARIO

Division of Sanitary Engineering

November 1965

Report on a
WATER POLLUTION SURVEY
of the
COMMUNITY OF LEASKDALE
TOWNSHIP OF SCOTT

INTRODUCTION

This water pollution survey was performed in response to a complaint of alleged contamination of the Leaskdale tributary of Pefferlaw and Uxbridge Brook at the community of Leaskdale. Water pollution surveys are made by this Commission for the purposes of locating and recording sources of existing and potential water pollution. Where pollution sources are noted, recommendations are made concerning their abatement to the parties concerned. During this survey discussions were held with officials of the Ontario County Health Unit. An unsuccessful attempt was made to contact Mr. R. G. Kester, Clerk, Township of Scott.

The appendices to this report are, an interpretation of the various tests performed on the samples, a tabulation of the sample results, and a map of the community showing the sampling point locations.

THE COMMUNITY OF LEASKDALE

Leaskdale is a small unincorporated centre located in the Township of Scott approximately six miles north of the Town of Uxbridge. About twenty individual residences are located in this

settlement. There is no industry. Water is obtained from wells and sewage disposal is effected by means of private subsurface disposal systems or privies. A small watercourse flows through the community and continues in an easterly direction for approximately one and one-half miles where it empties into Uxbridge Brook.

PREVIOUS RECOMMENDATIONS AND ACTION TAKEN

An investigation performed by the OWRC in the spring of 1964 revealed that inadequately treated sanitary wastes were gaining access to the local watercourse via a ditch and storm drain extending along the east side of the highway. It was noted that the source of these wastes was probably from malfunctioning subsurface sewage disposal systems and it was recommended that township officials endeavour to attain correction of these systems on a private basis.

The Township of Scott was recently added to the area of the Ontario County Health Unit. During 1964, investigations of some of the private systems were initiated by the health unit. Where malfunctioning systems were noted, owners were advised to correct the same. It would appear that some progress has been made in correcting these malfunctioning systems.

DISCUSSION

Considerable flow was noted in the storm sewer which discharged the contaminating wastes to the creek. Reportedly, a community resident struck a flowing well just prior to this investigation, and the resulting overflow of water was directed to this

sewer. It is therefore with this dilution factor in mind that the results of the sample taken from this discharge are interpreted.

Although the creek bank was checked visually throughout its entire course through the community, no further outfalls were noted.

SAMPLE RESULTS

Although high coliform counts were noted in the samples taken from the discharge of the storm drain on the east side of the highway, the results indicate an improvement in the quality of this discharge as compared to the previous survey. This is likely due to some corrections being made to some malfunctioning sewage disposal systems as well as the flushing action of the spring water on the sewer.

The slightly high coliform count obtained at the north bridge which is sample point number PUL 14.7 indicates that the above discharge is still having some effect on the quality of the downstream water.

Satisfactory results were obtained at the downstream limit of the municipality.

SUMMARY

Investigations performed at the community of Leaskdale revealed some improvement in the quality of the discharge from the storm sewer which was considered to be the major pollution source in the community. However, it would appear that some pollution

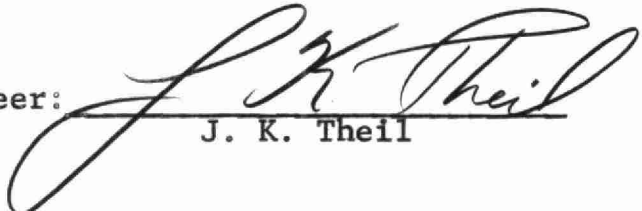
sources to this drain may still exist.

RECOMMENDATION

Any remaining sanitary connections to the storm drain in the community of Leaskdale should be severed.

All of which is respectfully submitted,

District Engineer:


J. K. Theil

Approved by: _____

J. R. Barr, Director,
Division of Sanitary Engineering.

Prepared by: M. M. Holy

/mh

INTERPRETATION OF ANALYSES

The analyses employed in this investigation to assess the quality of the surface water are as follows:

Biochemical Oxygen Demand (BOD)

The BOD of sewage, polluted water or industrial wastes is the oxygen required for stabilization (natural purification in a stream) of the decomposable organic matter or chemical material by aerobic biochemical action. Unless otherwise noted, a five-day BOD determination with incubation at 20°C is reported. A high BOD is indicative of organic or chemical pollution. A desirable upper limit in natural water commonly is four (4) parts per million.

Membrane Filter Coliform Count

The membrane filter technique is employed to obtain a direct enumeration of coliform organisms and is reported per 100 millilitres. The presence of coliforms indicates pollution from human or animal excrement, or from some non-faecal forms. A membrane filter coliform count in excess of the desirable upper limit of 2,400 organisms is considered to render the waters undesirable for bathing purposes.

Solids

The analyses for solids include tests for total, suspended, and dissolved solids. The first test measures both the solids in solution and in suspension. The results are reported in parts per million.

The suspended solids indicate the measure of undissolved solids of organic or inorganic nature in suspension. Land erosion, sewage, and industrial wastes are significant sources of suspended solids. The effect of suspended solids in water is reflected in difficulties associated with water purification and deposition in streams which would interfere with navigation and injure the habitat of fish. Where suspended solids values, ascertained by a quantitative analysis, approach 20 parts per million or less, laboratory difficulties usually result in these values being determined as turbidity, a qualitative analysis.

The dissolved solids are a measure of those solids in solution.

RESULTS OF SAMPLES COLLECTED FROM TRIBUTARY OF UXBRIDGE BROOK

<u>Sample Point No.</u>	<u>Description of Sampling Point</u>	<u>Date</u> 1965	<u>Coliforms</u> <u>per 100 ml.</u>	<u>5-Day</u> <u>BOD</u>	<u>S O L I D S</u>		
					<u>Total</u>	<u>Susp.</u>	<u>Diss.</u>
PUL 14.4	Leaskdale Creek upstream from Leaskdale	Sept. 20	370	1.0	298	3	295
PUL 14.6-D	Ditch to south bank of Leaskdale Creek - west side of highway	Sept. 20	740	2.6	392	23	369
PUL 14.6-W	Storm drain to south bank of Leaskdale Creek - east side of Highway	Sept. 20	48,000	1.5	192	1	191
		Oct. 5	348,000				
PUL 14.7	Leaskdale Creek at north bridge	Sept. 20	43,000	1.3	270	4	266
		Oct. 5	21,400				
PUL 15.0	Leaskdale Creek at downstream limit of Leaskdale	Sept. 20	580	1.3	310	8	302

